

# Using Interactive Notebooks in the Elementary Classroom

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# What Are Interactive Notebooks?

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They are:

- a place to take notes and reason about what was learned.
- a reference tool for students.
- a source for informal assessment.
- used with any grade level from kindergarten to high school. (Many of the ideas can be applied across the grades with a little creativity.)

They are not:

- reproduction of book pages.
- irrelevant showpieces.
- the same from teacher to teacher, or year to year.



# Why Use Interactive Notebooks?

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- They are a great reference tool for students. Students are encouraged to refer back to them regularly to review concepts and skills.
- They include activities that are engaging, hands-on, and fun. Does every lesson have to have this? No.) Games to support application can be added. They are also great for authentic problem solving.
- They can be shared at parent conferences as a portfolio, as they show a variety of skills covered and the student's levels of understanding.

- They use a variety of learning styles. They also allow students to reflect and use their own preferred styles, as well as explore other styles. They allow and encourage higher-level problems and activities.
- Students develop ownership and pride over their work and learning.
- They provide students with opportunities to teach and/or support each other, as well as to apply the SMPs.
- Students love them.

# Getting Started with Interactive Notebooks - Things to Consider

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Decide which kind of notebooks you prefer the students use. Students will likely need a second one if they are used often.

Think about how you want to set it up and what information you will include.

How will you score them and/or hold students accountable?

Remember that your journey using Interactive Notebooks will require you and your students to have a growth mindset.

As you are using them, reflect about what works and doesn't work for you and your students. Make adjustments accordingly.



# Suggested Procedures to Teach

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- Set up a table of contents - There are a variety of ways to do the table of contents, but consider places for topics and page numbers.
- Efficient strategies - When needed, cutting and gluing should only take a small part of the time. Have supplies ready. Set a timer. Project the time, if possible, so students know how much time is left.
- Glue use - There are various ways to glue. Glue sticks are quickest and cleanest, but often don't stay glued. Glue bottles allow pieces to stick, but may stick to pages or other items as well. If using them, the five dot strategy may be the best way to use it: One on each corner and one in the middle. A third choice, which has a bit of a learning curve, is glue sponges.

- Absent students - students should refer to the teacher's notebook to see what was missed. If pictures of the pages are uploaded onto a website, they can be copied from home.
- Using Interactive Notebooks - There are two parts to this. One is entering information into the Interactive Notebook. The other is how to use it as a resource. Teaching the students how to refer back to the information is much of the value of them. One suggestion for getting the students used to accessing the information is to give students a problem, then have a table of contents race to find which page will help them the most.



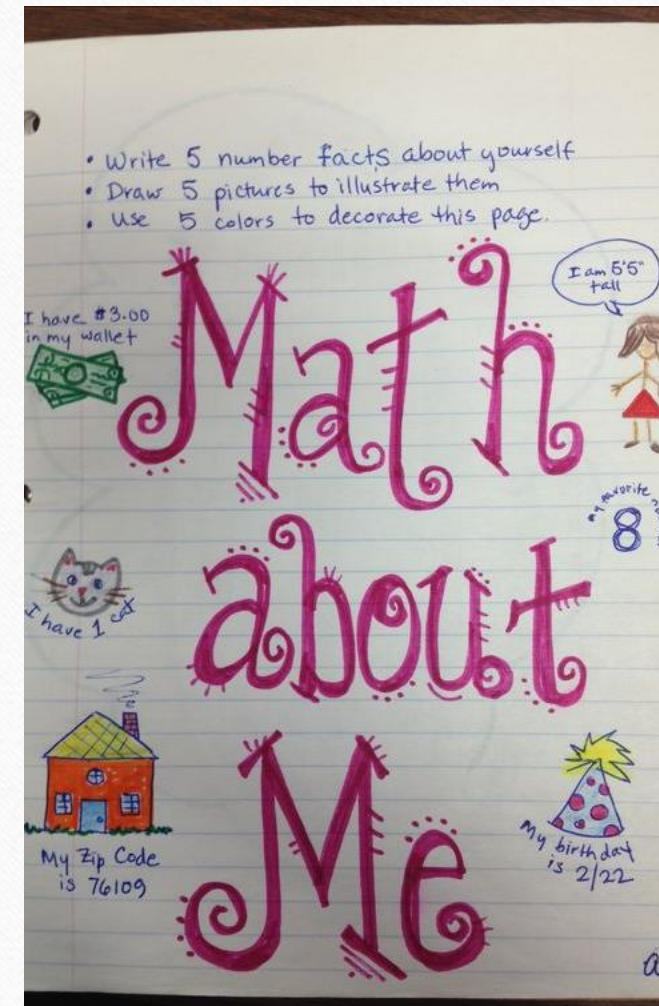
# What Goes in the Interactive Notebook?

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- A table of contents is often used in Interactive Notebooks. They can be a set of pages stapled together to the inside cover or can be handwritten on pages in the Interactive Notebook itself. Another variation includes creating a table of contents for each unit.
- Since it should be a reflection of the student as much as the math, a good idea for the first page(s) is to have a place for the students to express some of their personality.



- A "Math about Me" page is good for this. On it, students should write their name, the words "Math About Me," use five colors to decorate, give five math facts about them, and five pictures to illustrate them. Feel free to create your own variation.



- Page numbers are very useful. These can be done in several ways. Some people number it traditionally. Others only number one side of the pages since the right and left sides go together. A third option is to only number the first page of a lesson. This allows more than one page for a lesson, if needed. Students can number the pages themselves, but the importance of numbering them correctly should be stressed.
- Other items that are optional, but useful are a bookmark, such as a ribbon taped or hot glue gunned to the back cover (for students to mark the page being worked on next), an envelope or Ziploc bag glued to the back cover (for extra pieces, unfinished parts, math tools, or other things), and math resources, such as conversion charts, rubrics, general directions, etc. It is helpful to take time to teach how to use these.



# Anatomy of an Interactive Notebook Lesson

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## Output page

- This is where students express themselves through math, reflections, problem-solving, and explaining their reasoning.

## Input page

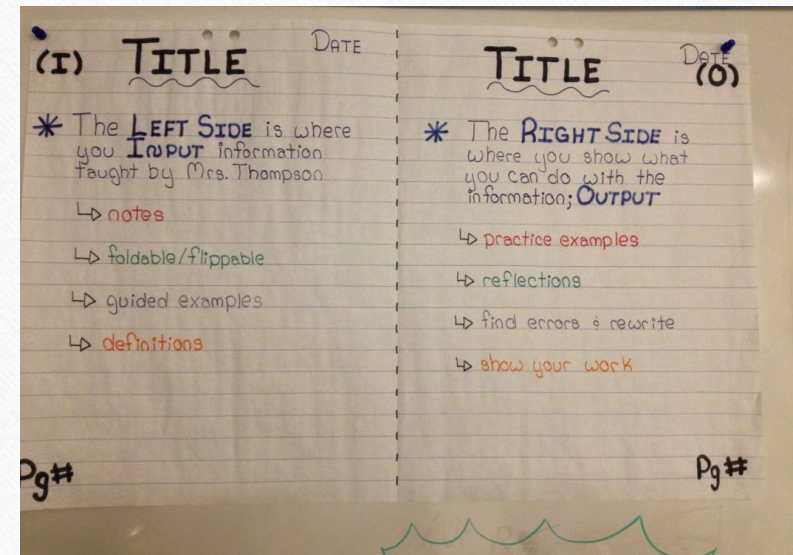
- This is where the notes are taken and the lesson part of the Interactive Notebook happen.

# Input/Output Examples

Choose the layout that makes the most sense to you.

OUTPUT = Left Page (even numbered pages)	INPUT = Right Page (odd numbered pages)
The output page shows your understanding of information. Work with input from the right side but present it in your own way. <b>BE CREATIVE!</b>	The input page is for the information you are given or have gathered. This is the information/skill/concept <b>you need to LEARN.</b>
<ul style="list-style-type: none"><li>• Diagrams</li><li>• Frayer Model</li><li>• Graphic Organizers</li><li>• Venn Diagram</li><li>• Concept Map/Web/Thinking Maps</li><li>• Explanations</li><li>• Reflection</li></ul>	<ul style="list-style-type: none"><li>• Notes- information</li><li>• Foldable</li><li>• Vocabulary</li><li>• Math Tools</li><li>• Activities</li><li>• Notes</li><li>• Question and Answer</li></ul>

Use them consistently.





# Input Page Information

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- Notes – handwritten or pre-typed
  - Definitions
  - Examples
  - Cut-outs
  - Foldables
  - Frayer Models
- If you want ideas or a starting point, there are plenty of examples/ideas on Pinterest and TPT. See the end of the PowerPoint for links to more information and examples.

# Examples of Input Pages

## Division strategies

I already know some division strategies:

I can use a related multiplication fact.  
 $7 \times 8 = 56$

$56 \div 8 = 7$  or  $\square \div 7 = 8$   
 $30 \div 6 = n$ ;  $6 \times n = 30$ ;  $n = 5$

I can use equal groups.

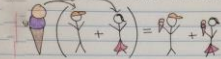


$56 \div 7 = 8$

$56 \div 8 = 7$

## 1.8 Distributive Property

The distributive property lets you multiply a sum by multiplying each addend separately. You "distribute" the multiplication.



$$a(b+c) = ab+ac$$

## Addition Strategy

One way to add is by using Addition Properties.

- The Identity Property of Addition states that the sum of any number and zero is that number.  $8 + 0 = 8$ ;  $0 + 8 = 8$
- The Commutative Property of Addition states that you can add two or more numbers in any order and get the same sum.  $3 + 4 = 4 + 3$
- The Associative Property of Addition states that you can group addends in different ways and still get the same sum.  $(3 + 7) + 2 = 10 + 2 = 12$

Sum is the answer to an addition problem.

Identity Problem Examples:  
 $12 + 0 = 12$ ;  $0 + 12 = 12$ ;  $0 + 10,000 = 10,000$

Commutative Problem Examples:  
 $85 + 60 = 60 + 85$ ;  $7 + 600 = 600 + 7$

Associative Property:  
 $(1 + 7) + 2 = 8 + 2 = 10$   
 $1 + (7 + 2) = 1 + 9 = 10$

## Bar graphs 2

Minutes Doing Go Noodle



How many minutes did they do in weeks 3 and 4?  $30 + 45 = 75$  min.

## definition

A pictograph gives information using pictures to show and compare information.

## Parts

It has a title and lists items being compared. There is a key which tells what each picture stands for (each picture represents a certain number of items).

example

Favorite	
Red	0000
Blue	00000
Yellow	0

Key: 0 stands for 5 people

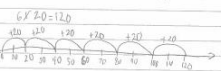
## Pictograph

uses  
 A pictograph makes it easy to compare amounts in each category and works well if the numbers being used are easy to translate into pictures (43 is hard to show in pictures).

## Multiply by multiples of ten

I can use strategies to multiply by multiples of ten.

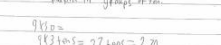
I can use number line.



I can use tables.



I can think in groups of ten.



## Division strategies

I already know some division strategies.

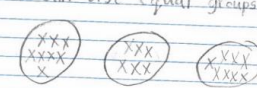
I can use a related multiplication fact.

$$7 \times 8 = 56$$

$$56 \div 8 = 7 \text{ or } 56 \div 7 = 8$$

$$30 \div 6 = n; 6 \times n = 30; n = 5$$

I can use equal groups.



$$56 \div 8 = 7$$

## Multiplication Review

I can use many strategies to multiply. I can use equal groups.

I can use a number line.

I can use an array.

I can use a multiplication chart.

I can see patterns in a hundred chart.

I can skip count: 5, 10, 15, 20, 25.

I can use properties of multiplication.

$3 \times 0 = 0$  Zero property.

$3 \times 1 = 3$  Identity property.

$3 \times 5 = 5 \times 3$  Commutative property.

$3(2 \times 5) = (3 \times 2) \times 5 = 6 \times 5 = 30$  Associative property.

W.O.D.B. → Which One Doesn't Belong?

Different answers can be correct if you tell why.

★ - It's not a triangle.

△ - It is orange.

△ - It is tiled.

△ - It looks like a ramp.

I can use an array to help me divide.

$$\begin{array}{l} \text{oooooooo} \\ \text{oooooooo} \\ \text{oooooooo} \\ \text{oooooooo} \end{array} \quad \begin{array}{l} 36 \div 4 = 9 \\ 36 \div 9 = 4 \\ 4 \times 9 = 36 \\ 9 \times 4 = 36 \end{array}$$

## line plots

### definition

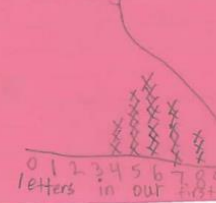
A line plot is a graph that uses numbers (x) along a number line to show how often something happens.

### Parts

A line plot has a number that shows all of the numbers that have data. It has a title and marks (x).

### uses

Line plots can help us see groups in the data. Line plots are only used to show how often something happens.





### BUILD. WRITE. SOLVE.

Build. Write. Solve.  
Build 6. Add 4 more. What is the sum?

Build. Write. Solve.  
Build 5. Add 3 more. What is the sum?

Build. Write. Solve.  
Build 10. Add 7 more. What is the sum?

Build. Write. Solve.  
Build 9. Add 6 more. What is the sum?

I can count to 20.

11 12 13 14 15 16 17 18 19 20

I can count to 20.

I can identify different tools to measure.

What tools do we measure with?

yardstick ruler tape measure clock thermometer scale

### Addition Strategies

I can use different strategies to solve addition problems.

9 + 1 = 10

Some addition strategies are counting on, doubles facts, near doubles, and making 10.

Addition means to combine two or more quantities.

FRIES

Addition means to combine two or more quantities.

### TYPES OF GRAPHS

Foldable page 71

Types of Graphs

Bar Graph Line Graph Photograph Circle Graph Tally Chart Line Plot

Perfect for Interactive Math Notebooks!  
By Kate Bing Conners - To the Square Inch

### Types of Angles

Apr 25<sup>th</sup> (right)

Learning Goal: identify and classify acute, right, obtuse, or straight angles.  
: measure and construct angles up to 180°

Acute Angle Right Angle Obtuse Angle Straight Angle

### TRANSLATIONS ON A COORDINATE GRID

Slide

Translate  $\triangle PRT$   
6 right and 3 down

$\triangle PRT$   
P(-5,4)  
R(-2,1)  
T(-5,1)

Translate 6 right and 3 down  
Add 6 to the x-coordinate  
Subtract 3 from the y-coordinate

$\triangle P'R'T'$   
P'(1,1)  
R'(4,2)  
T'(1,-2)

### Symmetry

Learning Goal:  
: sort polygons according to the number of lines of symmetry and the order of rotational symmetry.

Lines of Symmetry  
: a line that divides a 2D shape into halves that match when the shape is folded along the line of symmetry.

Rotational Symmetry  
: a shape that can fit on itself exactly more than once in complete rotation has rotational symmetry.

This trapezoid has 1 line of symmetry.

This square has 4 equal sides, and 4 lines of symmetry.

This parallelogram has 0 lines of symmetry.

23

Converting Capacity

Quart cup pint Quart Quart



3D Geometry → Cube

Feb. 29<sup>th</sup>

**Faces:**  
- 6 faces  
- congruent squares

**Edges:**  
- 12 edges

**Other Net Shapes:**

**Vertices:**  
- 8 vertices  
- 90° angles

**Surface Area:**  
96cm<sup>2</sup>

**Volume:**  
64cm<sup>3</sup>

**Sketch:**

**Volume →** the amount of space inside an object.

**Surface Area →** the total area of the faces of a polyhedron.

**V = l × w × h**  
= 4cm × 4cm × 4cm  
= 64cm<sup>3</sup>

**SA = l × w × 6**  
= 4 × 4 × 6  
= 96cm<sup>2</sup>

**Decimal Division**

Decimals and whole numbers division

Find:  $1.5 \div 3$

$11.5 \div 3 = 3.8\overline{3}$  (dividend) (divisor) (quotient)

$1.5 \div 3 = .5$

**4.NF.1 Equivalent Fractions**

Use the fraction bars to find equivalent fractions.

$\frac{2}{3} = \frac{4}{6}$

$\frac{3}{4} = \frac{6}{8}$

$\frac{3}{5} = \frac{6}{10}$

To find equivalent fractions, you can also multiply both the numerator and denominator by the same number.

$\frac{1}{2} \times 2 = \frac{2}{4}$     $\frac{3}{4} \times 3 = \frac{9}{12}$     $\frac{1}{4} \times 4 = \frac{4}{16}$

**Halves**

**Thirds**

**Fourths**

**Sixths**

**Eighths**

**GRAPHING LINEAR EQUATIONS**

**1 Graph the equation  $y = \frac{1}{2}x + 5$**

**3 Graph the equation  $y = 2x + 2$**

**What is the slope?**  
 $m = 2$

**What is the x-intercept?**  
 $(-1, 0)$

**What is the y-intercept?**  
 $(0, 2)$

**What is the slope?**  
 $m = \frac{2}{3}$

**What is the x-intercept?**  
 $(3, 0)$

**What is the y-intercept?**  
 $(0, -2)$

**I Can Make 7**

By

**Side Lengths and Angles in Triangles**

Learning Goal: Identify triangles (i.e. acute, right, obtuse, scalene, isosceles, equilateral), and classify them according to angle and side properties.

**Equilateral** → all 3 same length sides (all angles equal)

**Isosceles** → 2 same length sides (and 2 same angles)

**Obtuse** → one obtuse angle

**Right** → one right angle

**Scalene** → 0 same length sides (0 equal angles)

**Acute** → 3 acute angles

**Equilateral**

**Isosceles**

**Obtuse**

**Right**

**Scalene**

**Acute**

**Types of Quadrilaterals**

Polygon	Picture	Attributes
Square		• Regular polygon • Congruent sides • Congruent angles
Rectangle		• Congruent angles • 2 sets of parallel lines
Trapezoid		• 1 set of parallel lines • Irregular polygon
Rhombus		• 2 sets of parallel lines • 2 sets of congruent angles
Kite		• Irregular polygon • Lines are not parallel
Parallelogram		• 2 sets of parallel sides

**What is a variable? What is an expression?**

**Variable:** a letter or symbol that stands for one or more numbers unknown.

**Expression:** mathematical phrase or part of a number sentence that contains numbers, symbols, and/or variables but does NOT have an = sign or answer.

**Ex:**  $15 - a = 10$   
 $a = 5$   
 $15 - \Delta = 10$   
 $\Delta = 5$   
 $10 \div 2$   
 $14 + 7 = \square (3 + 2)$

**3.MD.7a**

Decompose the polygon into rectangles. Shade each rectangle a different color. Write and solve an equation to show the area of the polygon.

Decompose the polygon into rectangles. Shade each rectangle a different color. Write and solve an equation to show the area of the polygon.

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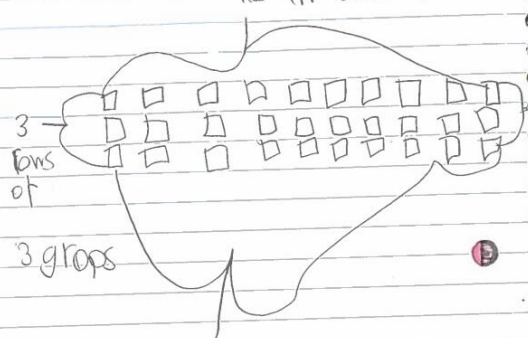
# Output Side Information

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- This page allows for a number of types of expression. If the directions can allow for low floor, high ceiling, students can choose what they feel will best help them. The page may be asked to be completed in class or at home. They may be asked to create their own problem and solve it. An in-class variation is to create a problem for a fellow student to solve. An at-home variation could be to create a problem and teach a friend or relative how to solve it.
- Students may be given one or more problems to solve. They may be able to choose from a group of problems to solve. Students may be asked to solve a problem in multiple ways, or using words, numbers, pictures, etc.
- Students may, in conjunction with the items above or independently, be asked to reflect on the lesson and/or their learning.

math

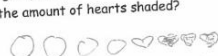
challenge yourself  
draw an array to show  
a model. 10 in each row



3 rows of 10 can  
be ritten as  $3 \times 10$

Homework:

1. Draw a group of 8 hearts. Shade 3 of them. What fraction shows the amount of hearts shaded?



2. Troy shaded a model to show the part of a coloring page that he finished coloring. What fraction names the shaded part? Explain how you know to write the fraction.



I know what to write because  
the numerator is how many shaded (2)  
and the denominator is how many  
in all (4).



# Examples of Output Pages

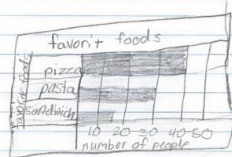
My favorite strategy is  
number line. Here is an example.

I like getting to the  
answer faster.  
 $45 - 25 = 20$



Create a graph of  
your choice.

Write and answer at least 2  
questions about the data.



1. How many people like sandwiches? Explain.  
15 because it is in the middle  
between the 10 and the 20  
and it is right in the  
middle so it would  
be 15.
2. How many people took the survey?  
85 people
3. How many people like pizza and pasta altogether?  
30 people

$$\begin{array}{r} \times 7 = 56 \\ \times 8 = 56 \end{array}$$

$8 \times 7 = 56$  is the same as  
 $7 \times 8$  and they are both the  
same but they are hard so  
I had to struggle to figure it  
out. But I got 42 and was  
actually 56.

Answer. Prove it on a number line.

16. Ben mowed  $\frac{2}{3}$  of his lawn in one hour. John mowed  $\frac{1}{2}$  of his lawn in one hour. Who mowed less of his lawn in one hour?

John

17. Darcy baked 8 muffins. She put blueberries in  $\frac{2}{3}$  of the muffins. She put raspberries in  $\frac{1}{3}$  of the muffins. Did more muffins have blueberries or raspberries?

blueberries



challenge yourself.

W.O.D.B.?

It's orange and the  
other are not.

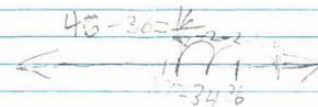
It's little and the others  
are bigger.

Make an array. Show the division  
problem to go with it.

$$\begin{array}{l} 30 \div 6 = 5 \\ 30 \div 5 = 6 \\ 6 \times 5 = 30 \\ 5 \times 6 = 30 \end{array}$$

$$6 \times 5 = 30$$

Challenge a relative or  
friend with a subtraction  
problem. Teach them how to  
subtract on a number line.





# Growth Mindset and Math



- Growth mindset is, in a very simplified definition, the belief that everyone is able to improve with effort. Productive struggles allow people to grow and improve.
- Starting the year with a growth mindset survey allows students to reflect on their beliefs about math and inform you about the student.
- Another suggestion is to start the Interactive Notebook with a math and mindset lesson.
- Jo Boaler's YouCubed.org website contains great mindset lessons and activities.  
<https://www.youcubed.org/>) Growth mindset messages are easy to include in the Interactive Notebook as comments as well.
- Students can set goals and create strategies for success.

1. Describe a new strategy you learned.
2. Tell a math word you learned and what it means.
3. Describe a mistake you made and what you learned from it.
4. Explain how you challenged yourself today.
5. Tell about something you noticed today and how it helped you solve a math problem.

### MATH COACH'S CORNER

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# Interactive Math Notebook Rules

- #1 Mistakes are OKAY! That is how we learn.
- #2 Fill in table of contents every day!
- #3 Pages must be put in correctly
- #4 TAKE PRIDE IN YOUR WORK!
- #5 All missed pages must be completed
- #6 Interact with math and become a problem solver!
- #7 Don't rip out pages!

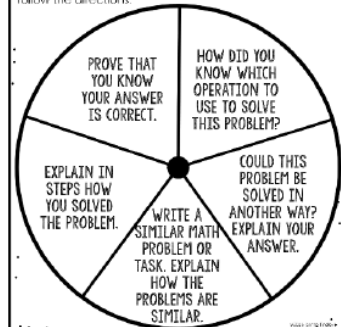
<ul style="list-style-type: none"> <li>➤ Today in math I learned that...</li> <li>➤ Today in math I found out...</li> <li>➤ Today in math I discovered...</li> <li>➤ The easiest part of today's math lesson was...</li> <li>➤ The hardest part of today's math lesson was...</li> <li>➤ One thing I learned today in math that I did not know before was...</li> <li>➤ The most important thing I learned in math this week was...</li> <li>➤ If someone were absent, I would tell him that we...</li> <li>➤ To check my answer, I...</li> <li>➤ The steps I took to solve the problem were...</li> <li>➤ The strategy I used to find a solution to the problem was...because...</li> <li>➤ Another strategy I could use to solve the problem would be...</li> <li>➤ I still don't understand...</li> <li>➤ I think the answer is...because...</li> <li>➤ I wonder...</li> <li>➤ I noticed...</li> <li>➤ This relates to...</li> </ul>	<ul style="list-style-type: none"> <li>➤ This reminds me of...</li> <li>➤ The first thing I did was...</li> <li>➤ First... Next... Then... After that...</li> <li>➤ I figured out ... by...</li> <li>➤ Something that is important to remember is...</li> <li>➤ I thought...</li> <li>➤ I decided...</li> <li>➤ I can show this idea by...</li> <li>➤ I compared...</li> <li>➤ Today's lesson helped me to understand...</li> <li>➤ The strategy that helped me to understand...</li> <li>➤ I would use this in my real life when...</li> <li>➤ A career where this skill would be helpful may be...</li> <li>➤ It is difficult for me...</li> <li>➤ It is easy for me...</li> <li>➤ I figured out this problem by...</li> <li>➤ The tricky part of this problem is...</li> <li>➤ I knew my answer was correct because...</li> <li>➤ I knew the answer was reasonable because...</li> <li>➤ If I were to describe... to you...</li> </ul>
<hr/> <ul style="list-style-type: none"> <li>➤ Justify: Why is your answer the best one?</li> <li>➤ Explain: How did you get your answer?</li> <li>➤ Show: Use pictures and/or numbers to show why your answer is the best one.</li> <li>➤ Describe: Use math language to justify, explain, or show how your answer is the best one.</li> </ul>	

Not Following Rules of Algebra  
Failure to Complete all of the Steps  
Not Showing Thinking for Each Step

Administrative	Date	Unit	Self-Insured
Learning Goal:			
My Error		My Corrected Solution	
<p>Describe and classify your error. Justify your classification with a complete sentence.</p> <p> <input type="radio"/> Careless Error             <input type="radio"/> Computational Error             <input type="radio"/> Precision Error             <input type="radio"/> Problem Solving Error         </p> <p>How will you avoid making this error in the future?</p>			

- STEP 1:** Partner A shares thoughts while Partner B listens and asks clarifying questions.
- STEP 2:** Partner B shares thoughts while Partner A listens and asks clarifying questions.
- STEP 3:** Both partners compare and contrast their thoughts.
- STEP 4:** Partners independently write their thoughts on their own paper.
- STEP 5:** When both partners are finished, trade papers and read each other's papers.  
Check to make sure:
  - ✓ The writing matches what was said.
  - ✓ The writing is clear to the reader.
  - ✓ The writing includes math vocabulary.

**Directions:** After solving a math problem or task, spin the spinner and follow the directions.



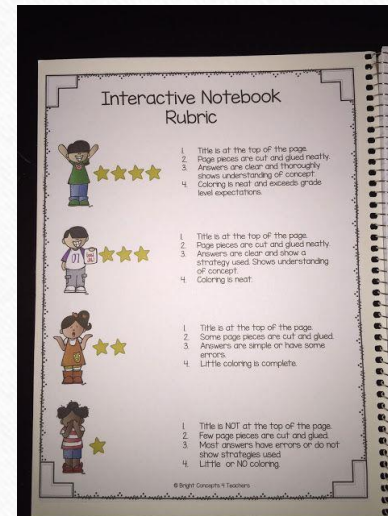
- ▶▶ Use the **highlighter** to highlight important information in word problems.
- ▶▶ Use the **eraser** because mistakes happen in math (and we learn from them).
- ▶▶ Use **sticky notes** when you need to read a problem or want to work out a problem in a different way.
- ▶▶ Use the **dice** and **game pieces** when you are playing a math game.
- ▶▶ Use the **dry erase marker** and **eraser** when using nater boards or laminated games.
- ▶▶ Use the **charts** to help you remember the math skills you have learned.

Mistakes are  
**EXPECTED,**  
respected, **INSPECTED,**  
and corrected.



# Grading Interactive Notebooks

- The types of rubrics and the ways to grade are quite diverse. Rubrics can be based on an overall single score, such as on the first rubric. They can be more complex, like in the second one. In any case, students need to be aware of the grading criteria.



Math Notebook Rubric

Student: \_\_\_\_\_

CATEGORY	Wow! (4)	Good. (3)	Almost. (2)	Poor. (1)	SCORE
Neatness & Organization	Handwriting is neat. Notebook is organized in an easy-to-understand format.	Handwriting is usually neat. Notebook is organized in an easy-to-understand format.	Handwriting is not very neat. Notebook organization is not easy to understand.	Handwriting is sloppy. Notebook organization is difficult to follow.	
Content Accuracy	All information recorded is accurate.	Most information recorded is accurate.	Some information is accurate, but most is not.	Information recorded is not accurate.	
Required Elements	Table of contents is up-to-date, pages are numbered, no pages have been skipped, and titles are included.	Table of contents is up-to-date, mostly all pages are numbered and include a title, no skipped pages.	Table of contents is not up-to-date, missing some page numbers and/or titles, a few skipped pages.	Table of contents has not been updated, pages are not numbered/titled, several skipped pages.	
Illustrations & Diagrams	Illustrations and diagrams are clear, accurate and labeled.	Illustrations and diagrams are usually clear, accurate and labeled.	Some illustrations and diagrams are clear, accurate, and labeled, with some missing.	Illustrations and diagrams are sloppy/unclear or missing.	

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Total: \_\_\_\_/16 \_\_\_\_%

- When they are graded varies as well. It should be done regularly so students can get timely feedback. It also allows for formative assessment. A group of Interactive Notebooks can be graded at one time so it isn't overwhelming, or choose to grade them all at the same time.
- An additional option is to have the students assess their own Interactive Notebooks and see how close their scores are to the teacher's. This improves metacognition and makes the students more aware of expectations and how they are doing. They can also engage in error analysis.



# Important Points

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- Neatness counts. Students need to write legibly.
- If it isn't useful, don't do it. Some Interactive Notebook lessons are mostly coloring or making something, but not an effective use of time. If foldables, cutouts, or other objects are not useful for furthering the lesson, don't use them. Not every page in the Interactive Notebook has to be Pinterest-worthy.

- Avoid tricks and key word lessons. The students need to reason through the math conceptually as well as procedurally. They then need to be able to apply that learning.
- When possible, let the students explore and arrive at their own understanding. Discuss misconceptions that come up.
- Reflect on the experiences. Use it to inform what you do next time (and not just the first year). I love this quote from Sarah Carter: “Last year was my second year of doing INBs. And, let's just say that my notebook pages from last year were easily 100 times better than my notebook pages from the first year. That's natural. We all learn and improve with time. When we stop desiring to learn or improve, that's when we need to quit our jobs and re-evaluate our lives.”



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# For more information and examples...

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